

WHAT IS CLAIMED IS:

1 1. A computerized method for configuring a network device, the method
2 comprising the steps of:
3 retrieving a configuration record from a common repository of configuration
4 records, the retrieved configuration record being associated with the network device;
5 modifying the retrieved configuration record;
6 storing the modified configuration record in the common repository;
7 generating at least one device-specific command corresponding to the modified
8 configuration record; and
9 transferring the generated first device-specific command to the network device.

1 2. The computerized method of claim 1, further comprising the step of:
2 searching the common repository for the configuration record;
3 wherein the configuration record is one of a plurality of configuration records
4 stored in the common repository.

1 3. The computerized method of claim 1, further comprising the step of:
2 publishing a message to an event bus;
3 wherein the published message indicates that the retrieved configuration record
4 has been modified.

1 4. The computerized method of claim 1, further comprising the step of:

2 verifying that the modified configuration record complies with a network policy.

1 5. The computerized method of claim 4, further comprising the step of:
2 publishing a work order to an event bus in response to verifying that the modified
3 configuration record complies with a network policy.

1 6. The method of claim 1, further comprising the step of:
2 verifying the successful completion of the step of transferring the generated first
3 device-specific command to the network device.

1 7. The method of claim 1, further comprising the step of:
2 receiving an event notification at an event bus, the event notification being
3 generated by the network device;
4 wherein the step of retrieving the configuration record is initiated in response to
5 the receiving of the event notification at the event bus.

1 8. The method of claim 1, wherein the step of generating the at least one
2 device-specific command comprises the steps of:
3 retrieving a device-specific command template, wherein the device-specific
4 command template comprises at least one variable field; and
5 populating the at least one variable field with data included in the modified
6 configuration record.

1 9. The method of claim 8, wherein the retrieved configuration record
2 indicates that the network device is from a particular manufacturer, and wherein the
3 retrieved device-specific command template is unique to the particular manufacturer.

1 10. The method of claim 8, wherein the retrieved configuration record
2 indicates that the network device is a particular device type and wherein the retrieved
3 device-specific command template is unique to the particular device type.

1 11. The method of claim 1, wherein the step of retrieving the configuration
2 record comprises the step of:
3 retrieving the configuration record from a distributed common repository.

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1 12. A system for configuring a network including a plurality of network
2 devices, the system comprising:
3 an event posting component configured to receive a network event posting related
4 to a first of the plurality of network devices; and
5 an action manager in communication with the event posting component, the
6 action manager configured to receive the network event posting and to configure the first
7 of the plurality of network devices in accordance with the network event posting.

1 13. The system of claim 12, further comprising:
2 a configuration storage module in communication with the event posting
3 component, the configuration storage module configured to store at least one
4 configuration record for each of the plurality of network devices;
5 wherein the action manager is configured to configure the first of the plurality of
6 network devices by utilizing a configuration record corresponding to the first of the
7 plurality network device.

1 14. The system of claim 13, wherein the configuration storage module
2 comprises a distributed storage arrangement.

1 15. The system of claim 12, further comprising:
2 a policy manager in communication with the event posting component.

1 16. The system of claim 12, further comprising:
2 a health manager in communication with the event posting component;
3 wherein the health manager is configured to monitor the health of at least one of
4 the plurality of network devices and to report the health of the at least one of the plurality
5 of network devices to the event posting component.

1 17. The system of claim 12, wherein the event posting component comprises:
2 a central posting location.

1 18. The system of claim 12, wherein the event posting component comprises:
2 a distributed posting location.

1 19. The system of claim 12, further comprising:
2 a device-specific template storage module in communication with the action
3 manager, the device-specific template storage module configured to store a plurality of
4 device-specific command templates.

1 20. The system of claim 19, wherein the action manager is configured to read
2 a first of the plurality of device-specific templates from the device-specific template
3 storage module and generate a device-specific command using the read device-specific
4 template;
5 wherein the generated device-specific command is enabled to configure the first
6 of the plurality of network devices in accordance with the network posting.

1 21. A system for configuring a network including a plurality of network
2 devices, the system comprising:
3 a configuration storage module configured to store at least one configuration
4 record for each of the plurality of network devices; and
5 an action manager in communication with the configuration storage module, the
6 action manager configured to receive an indication that a first of the configuration
7 records has been altered, and the action manager being further configured to generate a
8 device-specific command for a network device included in the plurality of network
9 devices, wherein the network device corresponds to the first of the configuration records.

1 22. The system of claim 21, further comprising:
2 an event posting component configured to provide to the action manager the
3 indication that the first of the configuration records has been altered.

1 23. The system of claim 21, further comprising:
2 a policy manager in communication with the event posting component.

1 24. The system of claim 21, further comprising:
2 a device-specific template storage module in communication with the action
3 manager, the device-specific template storage module configured to store a plurality of
4 device-specific command templates;
5 wherein at least a first of the plurality of device-specific command templates is
6 usable by the action manager to generate the device-specific command for the network
7 device.

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1 25. A system for configuring a network device, the system comprising:
2 at least a first processing element configured to execute instructions;
3 at least a first memory device electronically coupled with the at least a first
4 processing element; and
5 a plurality of instructions stored on the memory device, the plurality of
6 instructions configured to cause the at least a first processing element to perform the steps
7 of:
8 retrieving a configuration record from a common repository of
9 configuration records, the retrieved configuration record being associated with the
10 network device;
11 modifying the retrieved configuration record;
12 storing the modified configuration record in the common repository;
13 generating at least a first device-specific command corresponding to the
14 modified configuration record; and
15 transferring the generated first device-specific command to the network
16 device.

1 26. The system of claim 25, wherein the plurality of instructions are further
2 configured to cause the at least a first processor to perform the step of:
3 searching the common repository for the configuration record;
4 wherein the configuration record is one of a plurality of configuration records
5 stored in the common repository.

1 27. The system of claim 25, wherein the plurality of instructions are further
2 configured to cause the at least a first processor to perform the step of:
3 publishing a message to an event bus;
4 wherein the published message indicates that the retrieved configuration record
5 has been modified.

1 28. The system of claim 25, wherein the plurality of instructions are further
2 configured to cause the at least a first processor to perform the step of:
3 verifying that the modified configuration record complies with a network policy.

1 29. The system of claim 28, wherein the plurality of instructions are further
2 configured to cause the at least a first processor to perform the step of:
3 publishing a work order to an event bus in response to verifying that the modified
4 configuration record complies with a network policy.

1 30. The system of claim 28, wherein the plurality of instructions are further
2 configured to cause the at least a first processor to perform the step of:
3 verifying the successful completion of the step of transferring the generated first
4 device-specific command to the network device.

1 31. The system of claim 25, wherein the plurality of instructions are further
2 configured to cause the at least a first processor to perform the step of:

3 receiving an event notification at an event bus, the event notification being
4 generated by the network device;
5 wherein the step of retrieving the configuration record is initiated in response to
6 the receiving of the event notification at the event bus.

1 32. The system of claim 25, wherein the plurality of instructions are
2 configured to cause the at least a first processor to generate the at least a first device-
3 specific command by:

4 retrieving a device-specific command template, wherein the device-specific
5 command template comprises at least one variable field; and
6 populating the at least one variable field with data included in the modified
7 configuration record.

1 33. The system of claim 32, wherein the retrieved configuration record
2 indicates that the network device is from a particular manufacturer and wherein the
3 retrieved device-specific command template is unique to the particular manufacturer.

1 34. The system of claim 32, wherein the retrieved configuration record
2 indicates that the network device is a particular device type and wherein the retrieved
3 device-specific command template is unique to the particular device type.

- 1 35. The system of claim 25, wherein the plurality of instructions are
- 2 configured to cause the at least a first processor to perform the step of retrieving the
- 3 configuration record by:
- 4 retrieving the configuration record from a distributed common repository.

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1 36. A system for configuring a network device, the system comprising:
2 means for retrieving a configuration record from a common repository of
3 configuration records, the retrieved configuration record associated with the network
4 device;
5 means for modifying the retrieved configuration record; and
6 means for storing the modified configuration record in the common repository.

1 37. The system of claim 36, further comprising:
2 means for generating at least a first device-specific command corresponding to
3 the modified configuration record; and
4 means for transferring the generated first device-specific command to the network
5 device.

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